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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
|-----------------|-------------|----------------------|---------------------|

09/196,680 11/20/98 MEYER

S 5903-157

000570 QM02/0830  
AKIN GUMP STRAUSS HAUER & FELD LLP  
ONE COMMERCE SQUARE  
2005 MARKET STREET SUITE 2200  
PHILADELPHIA PA 19103

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| EXAMINER |
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| KIM, C | ART UNIT | PAPER NUMBER |
|--------|----------|--------------|

3752

DATE MAILED:

08/30/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/196,680

Applicant(s)

Meyer et al.

Examiner

Christopher S. Klm

Group Art Unit

3752



☒ Responsive to communication(s) filed on 26 Jun 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-16 is/are pending in the applicat

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-16 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☒ The proposed drawing correction, filed on 26 Jun 2000 is ☒ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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## **DETAILED ACTION**

### ***Drawings***

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on June 26, 2000 have been approved.

### ***Claim Objections***

2. Claim 14 is objected to because of the following informalities: in line 14, "horizontal" should read --horizontal--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer in view of Tramm.

With respect to claims 1-3, 7, 8, 9, and 13, Fischer discloses a sprinkler comprising: a generally tubular body 30 having a central passageway 31, a closure 40, a trigger 44, and a deflector 38. Fischer teaches the use of a deflector 38 shaped and positioned to transform a horizontal flow of water into a spray pattern of droplets dispersed over a generally horizontal, rectangularly-shaped coverage area (see figures 1 and 6). The coverage area may be up to 16 ft

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x 24 ft (see column 3 lines 55-58). Tramm discloses, in column 5, lines 12-14, a horizontal-type fire protection sprinkler having a K-factor of at least 3.5, or at least 5.0, or at least 7.0, or at least 10.5, or at least 13.0. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the sprinkler of Fischer with the range of K-factors taught by Tramm to provide a specific flow rate depending on pressure.

With respect to claim 4, Fischer discloses the limitations of the claimed invention with the exception of the liquid filled glass bulb. Tramm discloses, pictorially, in figure 2, a liquid filled glass bulb 20. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to replace the trigger of Fischer with the trigger (liquid filled glass bulb) of Tramm to eliminate the need for solder.

With respect to claims 5, 6, 10-12, and 14-16, Fischer discloses, in column 3, lines 55-58, a coverage area of 16 ft x 24 ft (using a deflector comprising a generally planar face portion and a canopy portion, see figure 2). It would have been obvious to a person of ordinary skill in the art at the time the invention was made that the coverage area is dependent on the fluid pressure, and therefore, any coverage area less than 16 ft x 24 ft can be attained by reducing the pressure (or increasing the K-factor which results in a lower pressure as defined by the formula in column 5, lines 30-38 of Tramm). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to adjust the coverage area depending on the size of the room, since it has been held that where the general conditions of a claim are disclosed in the prior art,

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discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

***Response to Arguments***

5. Applicant's arguments with respect to claim 1-16 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

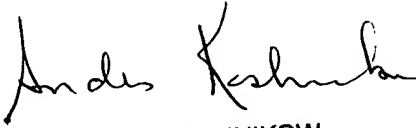
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (703) 308-8336. The examiner can normally be reached on Monday-Thursday from 6:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andres Kashnikow, can be reached on (703) 308-1137. The fax phone number for this Group is (703) 305-3588.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1113.

CK

August 28, 2000

  
ANDRES KASHNIKOW  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700  
8/28/00